In the Claims:

1. (Currently Amended) A method for compressing high repetitivity data, in particular data used in memory device testing, comprising the steps of:

-recognizing a sequence of repetitive data and encoding said sequence of repetitive data, ~~characterized in that~~

wherein the encoding of said sequence of repetitive data is obtained using in combination one or more words with a format for non-compressible data and one or more words with a format for compressible data,

a word with a format for non-compressible data being made up of a set of bits, in which a specific bit is set at a first logic value and the remaining bits are formed by at least some of the bits of the non-compressible datum to be encoded, and

-a word with a format for compressible data being made up of a set of bits, in which,

-a specific bit is set at a second logic value different from said first logic value,

a first set of bits indicates the total number of subsequent words, which, together with said word, encode said sequence of repetitive data, and

a second set of bits indicates the number of times that the words indicated by said first set of bits are repeated.

2. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein said specific bit of a word with a format for non-compressible data is the most significant bit.

3. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein said specific bit of a word with a format for compressible data is the most significant bit.

4. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein said first set of bits of a word with a format for compressible data is

formed by the bits following said specific bit.

5. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein said second set of bits of a word with a format for compressible data is formed by the bits subsequent to those of said first set of bits.

6. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein said remaining bits of a word with a format for non-compressible data are all the bits of the non-compressible datum to be encoded.

7. (Currently Amended) The method according to claim 1, ~~characterized in that~~wherein the remaining bits of a word with a format for non-compressible data are all the bits of the non-compressible datum to be encoded, except for a specific bit.

8. (Currently Amended) The method according to claim 7, ~~characterized in that~~wherein said specific bit of the non-compressible datum to be encoded is the most significant bit.

9. (Currently Amended) The method according to claim 7, ~~characterized in that~~wherein, in the case where said specific bit of the non-compressible datum to be encoded has a certain logic value, a further word is generated, which is formed by a set of bits in which a specific bit is set at said first logic value and the remaining bits are set at said second logic value.

10. (Currently Amended) The method according to claim 9, ~~characterized in that~~wherein said further word is generated in the case where said specific bit of the non-compressible datum to be encoded assumes said first logic value.

11. (Currently Amended) The method according to claim 9, ~~characterized in that~~wherein said specific bit of said further word is the most significant bit.

12. (Currently Amended) The method according to claim 7, ~~characterized in~~

~~that~~wherein a word with a format for non-compressible data has a further specific bit set at said first logic value and arranged between said specific bit set at said second logic value and said first set of bits.

13. (Currently Amended) The method according to claim 7, ~~characterized in that~~wherein the encoding of said sequence of repetitive data is carried out using also one or more words with a format for compressible data specific for encoding a sequence of zeros, a word with said specific format for compressible data being made up of a set of bits in which a first specific bit and a second specific bit are set at said second logic value, and the remaining bits are represented by the number of repetitions of said zeros in said sequence of zeros.

14. (Currently Amended) The method according to claim 13, ~~characterized in that~~wherein said first specific bit and said second specific bit are the two most significant bits of said word.

15. (Original) A method for compressing repetitive data, comprising:

recognizing a sequence of repetitive data;

encoding the recognized sequence of repetitive data into a combination of compressible data words and non-compressible data words,

wherein each of the non-compressible data words includes a plurality of bits, with at least one bit identifying the word as a non-compressible data word and a group of bits representing non-compressible data represented by the word; and

wherein each of the compressible data words includes,

a plurality of bits, at least one bit identifying the word as a compressible data word,

a first group of bits indicating a total number of subsequent words that define a repetitive sequence within the data and which together with the word encode that sequence of repetitive data, and

a second group of bits indicating the number of times that the repetitive sequence defined by the first group of bits is repeated.

16. (Original) The method of claim 1 wherein a most significant bit of each non-compressible and compressible data word identifies the word as either a non-compressible or compressible data word.

17. (Original) The method of claim 1 wherein each compressible data word further includes, as part of the at least one bit identifying the word as a compressible data word, at least one bit identifying the word encoding bits having a first logic value, and wherein the remaining bits have a value indicating the number of bits having the first logic value that are being encoded.

18. (Currently Amended) An electronic system, comprising:

a functional device; and

a tester coupled to the functional device and operable in combination with the functional device to recognize a sequence of repetitive data from the functional device and to encode the sequence into a combination of compressible data words and non-compressible data words,

each non-compressible data word including a plurality of bits, with at least one bit identifying the word as a non-compressible data word and a group of bits representing non-compressible data represented by the word, and

each compressible data word including a plurality of bits,

at least one bit identifying the word as a compressible data word,

a first group of bits indicating a total number of subsequent words that define a repetitive sequence within the data and which together with the word encode that sequence of repetitive data, and

a second group of bits indicating the number of times that the repetitive sequence defined by the first group of bits is repeated.

19. (Original) The electronic system of claim 18 wherein the system comprises a memory test system and wherein the tester comprises a memory tester and the functional device comprises a memory device.

20. (Original) The electronic system of claim 19 wherein the memory device comprises an embedded memory device including a processor.

21. (Original) The electronic system of claim 20 wherein the processor in the embedded memory device recognizes the sequence of repetitive data from the functional device and encodes the sequence into a combination of compressible data words and non-compressible data words, and provides these data words to the tester.

22. (Original) The electronic system of claim 19 further comprising a workstation coupled to the tester, and wherein the memory tester provides to the workstation over a communications link the compressible data words and non-compressible data words corresponding to an encoded version of the recognized sequence of repetitive data.